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10/552,147	10/07/2005	Norifumi Kikkawa	09812.0115	7147

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EXAMINER	
HUSSAIN, IMAD	

ART UNIT	PAPER NUMBER
2109	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/552,147	KIKKAWA ET AL.
	Examiner	Art Unit
	Imad Hussain	2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-58* is/are rejected.

7)☒ Claim(s) *30-58* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/11/2006 and 10/07/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. Japan 2003-103716, filed on 8 April 2003.

Specification

2. The disclosure is objected to because of the following informalities: URL is repeatedly erroneously expanded as "Uniform Resource Locators" (e.g., page 7, line 12) instead of "Uniform Resource Locator".

Appropriate correction is required.

3. The disclosure is objected to because of the following informalities: SOAP is repeatedly erroneously expanded as "Simple Object Access Control" (e.g., page 14, line 18) instead of "Simple Object Access Protocol".

Appropriate correction is required.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors such as the above. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 31, 32, 40, 41, 44, 46, 47, 52, 53, and 56 are objected to because of the following informalities: URL is expanded as "Uniform Resource Locators" instead of "Uniform Resource Locator". Appropriate correction is required.

6. Claims 37 and 50 are objected to because of the following informalities: SOAP is erroneously expanded as "Simple Object Access Control" instead of "Simple Object Access Protocol". Appropriate correction is required.

7. Claims 30, 32, 34, 35, 36, 37, 39, 40, 42, 43, 45, 47, 49, 51, 52, 54, 55, 56, 57, and 58 are objected to because of the following informalities: improper usage of commas. Appropriate correction is required.

8. Claims 30-58 are objected to because of the following informalities: the claims appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors, such as the aforementioned improper usage of commas and the nested relative clauses of claim 35. Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 57 and 58 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is a computer program, which does not fall within at least one of the four categories of patent eligible subject matter recited in 35 U.S.C 101 (process, machine, manufacture, or composition of matter).

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 40, 41, 52 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The condition of "matching of coded data for transmission to the client can be maintained" may be interpreted as either: performing a bit-by-bit matching analysis of the current content data with the new content data and severing the connection on a mismatch or that the change between the current coded content data and the new coded content data does not preclude the HTTP data transmission stream from being maintained. For the purposes of examination the above-mentioned claimed clause will be interpreted as "the data transmission stream to the client can be maintained".

12. Claim 45 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The step of "setting a control instance... as a unit of content for control" may be interpreted as any of: using the control instance as an active controller (controlling other entities), packaging a control instance as a piece of data to be processed by an external controller, or setting a control instance for purposes of control (by another entity). For the purposes of examination the above-mentioned claimed clause will be interpreted as "setting a control instance for purposes of control" for the purposes of this office action.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 30, 31, 33-38, 42, 43, 45, 46, 48-50, 54, 55, 57, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritchie et al. (*UPnP AV Architecture:0.83*, hereafter Ritchie) further in view of Debique et al (*ContentDirectory:1 Service Template Version 1.01*, hereafter Debique).

Regarding claim 30, Ritchie teaches a content providing server [*Media Server* and *Control Point*, sections 5.1 and 5.3] that executes a content transmission process to a client connected via a local area network [*home network*], characterized by comprising:

a tuner that executes a data reception process [page 7, paragraph 1];

a data transmission/reception section that executes a communication process between the server and the client via the local area network for received content by said tuner and control information [page 5, paragraph 5];

a storage section having attribute information corresponding to the received content by the tuner as content information [*Content Directory Service*, section 5.1.1];

a content management section that executes a process of providing said content information to the client [*Content Directory Service*, section 5.1.1]; and

a content distribution control section that executes live streaming distribution control of the received content via said tuner to the client via the local area network [section 5.3, item 7],

wherein said storage section is configured to store a channel list identifier as identification information [*Content Item*, section 5.1.1], and

wherein said content distribution control section is configured to set a plurality of tuner-received content, to execute control over content for distribution on the basis of a control request corresponding to the channel list identifier received from the client [section 5.3, item 7].

Ritchie does not explicitly disclose that the channel list identifier contains at least a plurality of channels. However, Debique teaches that "a playlistContainer instance represents a collection of objects (*channels*)... audio, video, and images" and "may have an element for playback of the whole playlist" [section 7.8].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's identifiers with the resource identifier types provided by Debique as doing so would allow for different types of content to be identified. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 31, Ritchie teaches that:

the storage section is configured to store the channel list identifier as attribute information corresponding to said tuner-received content [*Content Item*, section 5.1.1; and

the content distribution control section is configured to execute distribution control over the content on the plurality of channels received by said tuner specified on the basis of said channel list identifier according to the control request from the client [section 5.3, item 7].

Ritchie does not explicitly disclose that:

said channel list identifier is a channel list URL (Uniform Resource Locators);

said storage section is configured to store said channel list URL as attribute information corresponding to said tuner-received content; and

said content distribution control section is configured to execute distribution control over the content on the plurality of channels received by said tuner specified on the basis of said channel list URL according to the control request from the client.

However, Debique teaches that resources (*channels*) have URI (*URL*) identifiers as attributes [section 2.8.5.2].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's identifiers with the identifier URIs provided by Debique as doing so would allow for a specific means by which to address identified resources. Therefore, the invention

as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 33, Ritchie teaches that:

the content information contains content-corresponding protocol information [section 5.1.1].

Ritchie does not explicitly disclose that protocol information contains a function ID as tuner identification information and that control is determined on the basis of the function ID.

However, Ritchie teaches that the Content Items (*channels*) have meta-data including properties and that control can be determined on the basis of this meta-data [Ritchie, section 5.1.1]. Debique teaches that these properties include a channelNr (*function ID*) that is used for identification of tuner channels [Debique, Appendix B].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's properties with the property types provided by Debique as doing so would allow for different types of properties to be identified. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 34, the claim comprises substantially the same limitations as claim 30. The same rationale for rejection is applicable.

Regarding claim 35, Ritchie teaches that the content distribution control section is configured to set a control instance that executes content distribution control over each content for distribution, to execute content-based distribution control which is based on the control instance, and execute connection management which is based on an instance ID [section 5.3, step 5] as an identifier of said control instance, a connection ID as a connection identifier between the server and the client [section 5.1, paragraph 2], and protocol information corresponding to the content for distribution [section 5.1.1], [which] are associated with each other [as all are tied to the same content].

Ritchie does not explicitly disclose that information is stored in a connection management table. However, Debique teaches that state and ID information can be stored in a table [*serviceStateTable*, pages 60-62].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to store Ritchie's IDs in the table provided by Debique as doing so would allow for information to be stored, parsed and retrieved efficiently. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 36, Ritchie teaches that:

the content distribution control section is configured to set a control instance that executes content distribution control over each content for distribution, to execute content-based distribution control which is based on the control instance [*This InstanceID is used in conjunction with the device's AVTransport Service (i.e. the device returning the AVTransport InstanceID) to control the flow of the content (e.g. Play, Stop, Pause, Seek, etc)*, section 5.3, step 5]; and

the control instance is configured to have an instance ID set as an identifier, and execute the content distribution control according to a control request from the client wherein the control instance ID is designated [section 5.3, step 5].

Regarding claim 37, Ritchie teaches that the content distribution control section is configured to receive a control request for content for distribution which is compliant with a SOAP (Simple Object Access Control) protocol, from the client, and execute distribution control over the tuner-received content on the basis of said control request [*components interact with each other using... standard UPnP protocols (e.g., SOAP over HTTP)*, page 6, paragraph 5].

Regarding claim 38, Ritchie does not explicitly disclose that the channel list is configured to be set as a list formed from the plurality of channels divided according to categories.

However, Debique teaches a genre (*category*)-based container (*list*) of objects (*channels*) [Debique, section 7.7] as a resource type.

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's identifiers with the resource identifier types provided by Debique as doing so would allow for different types of content to be identified. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 42, Ritchie teaches an information processing apparatus [*MediaRenderer* and *Control Point*, sections 5.2 and 5.3] that receives received content by a tuner set to a server [*MediaServer*, section 5.1] connected via a local area network [*home network*], from the server via the local area network, characterized by comprising:

a data transmission/reception section that executes data transmission/reception process with respect to the server that provides tuner-received content via the local area network [section 5.2]; and

a control section that transmits via the local area network a content transmission request, to said server, and also executes a process of transmitting distribution control request for tuner-received content wherein a control instance that executes content distribution control is designated in said server [section 5.3, item 7].

Ritchie does not explicitly disclose that a content transmission request is based on a channel list identifier which is an identifier of a list containing at least a plurality of channels of received channels by the tuner. However, Debique teaches that "a playlistContainer instance represents a collection of objects (*channels*)... audio, video, and images" and "may have an element for playback of the whole playlist" [section 7.8].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's identifiers with the resource identifier types provided by Debique as doing so would allow for different types of content to be identified. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 43, Ritchie teaches that the control section is configured to transmit a connection preparation request, to said server, to acquire an ID of a control instance that executes control over the tuner-received content, received from said server, and to execute a process of transmitting the distribution control request for the tuner-received content wherein said control instance ID is designated, as a response to said connection preparation request [section 5.3, steps 4 and 5].

Ritchie does not explicitly disclose that protocol information contains a function ID as tuner identification information.

However, Ritchie teaches that the Content Items (*channels*) have meta-data including properties [Ritchie, section 5.1.1]. Debique teaches that these properties include a channelNr (*function ID*) that is used for identification of tuner channels [Debique, Appendix B].

Ritchie and Debique are analogous subject matter in the same field of endeavor, as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's properties with the property types provided by Debique as doing so would allow for different types of properties to be identified. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 45, Ritchie teaches a method for transmitting received content by a tuner set to a content providing server, to a client via a local area network, characterized by comprising:

a control instance setting step of setting a control instance wherein tuner-received content corresponding to a plurality of channels described in a channel list containing at least the plurality of channels of received channels by said tuner is set, as a unit of content for control [*this action may return the InstanceID of an AVTransport service that the Control Point can use to control the flow of this content*, section 5.1.2];

a control request reception step of receiving a control request to said control instance from the client via the local area network [figure of section 6.4]; and

a control step of executing tuner control by said control instance on the basis of said control request [section 5.3, step 6].

Regarding claim 46, the claim comprises substantially the same limitations as claims 45 and 31. The same rationale for rejection is applicable. The claim comprises the further limitation, taught by Ritchie, that the control instance setting step comprises a step of associating said channel list URL with the control instance [*the MediaServer can distinguish between multiple instances of the services (*channel or channel list*) by using the InstanceID (*control instance*)*, section 5.1.3].

Regarding claim 48, the claim comprises substantially the same limitations as claims 45 and 33. The same rationale for rejection is applicable.

Regarding claim 49, the claim comprises substantially the same limitations as claims 45 and 35. The same rationale for rejection is applicable.

Regarding claim 50, the claim comprises substantially the same limitations as claims 45 and 37. The same rationale for rejection is applicable.

Regarding claim 54, the claim comprises substantially the same limitations as claim 42. The same rationale for rejection is applicable.

Regarding claim 55, the claim comprises substantially the same limitations as claim 43. The same rationale for rejection is applicable.

Regarding claim 57, the claim comprises substantially the same limitations as claim 45. The same rationale for rejection is applicable.

Regarding claim 58, the claim comprises substantially the same limitations as claim 54. The same rationale for rejection is applicable.

15. Claims 32, 39, 41, 44, 47, 51, 53, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritchie in view of Debique and further in view of Dave Conger (*Playing Audio on Your PPC From Your Desktop*, hereafter Conger).

Regarding claim 32, Ritchie as modified by Debique teaches:

the channel list identifier is a channel list URL (Uniform Resource Locators) [Debique, section 2.8.5.2]; and

connection for distribution of the tuner-received content between the server and the client is an HTTP (HyperText Transport Protocol) connection [Ritchie, section 6.5] set on the basis of said channel list URL.

Ritchie and Debique do not explicitly disclose that the content distribution control section is configured to execute content distribution which continuously uses the HTTP connection set on the basis of said channel list URL, before and after channel switching

executed as switching of the plurality of tuner-received content corresponding to the plurality of channels described in said channel list. However, Conger teaches a method by which a single HTTP connection [Starting the Media Stream, Connecting With Your Pocket PC] may be consistently used before and after song (*channel*) switching [Extra Notes, second bullet point].

Conger and Ritchie are in the same field of endeavor as both cover the art of streaming media across a local area network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's HTTP streaming technique with Conger's single-connection approach as doing so would allow for media to be broadcast without the break in streaming otherwise associated with switching streams. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 39, the claim comprises substantially the same limitations as claim 32. The same rationale for rejection is applicable. The claim further comprises the limitation that an HTTP-GET method is received as a content request, as taught by Ritchie [section 6.5].

Regarding claim 41, the claim comprises substantially the same limitations of claims 39. The same rationale for rejection is applicable.

Regarding claim 44, the claim comprises the limitations of claim 32 and 42. The same rationale for rejection is applicable.

Regarding claim 47, the claim comprises the limitations of claim 32 and 45. The same rationale for rejection is applicable.

Regarding claim 51, the claim comprises substantially the same limitations as claims 45 and 39. The same rationale for rejection is applicable.

Regarding claim 53, the claim comprises substantially the same limitations as claims 45 and 41. The same rationale for rejection is applicable.

Regarding claim 56, the claim comprises substantially the same limitations as claim 44. The same rationale for rejection is applicable.

16. Claims 40 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritchie in view of Debique, further in view of Conger, and further in view of RFC 2616 (Hypertext Transfer Protocol -- HTTP/1.1, hereafter RFC 2616).

Regarding claim 40, the claim comprises substantially the same limitations as claim 32. The same rationale for rejection is applicable. The claim further comprises the characteristics that:

the content distribution control section is configured to determine whether or not matching of coded data for transmission to the client can be maintained even when the plurality of channels described in said channel list has been switched, and execute breakage of the HTTP connection where it is determined that the matching cannot be maintained; and

the content providing server is configured to further execute a process of notifying breakage information about the HTTP connection via an event notification connection between the server and the client.

Ritchie does not explicitly disclose a means for determining whether the coded data transmission to the client can be maintained and breaking the transmission if it cannot or for notifying the client of HTTP breakage. However, RFC 2616 teaches that the server may become aware that it is incapable of performing a client request [section 10.5, first paragraph and section 10.5.1] and also that the sever will break [*close*] an HTTP connection on an error [section 10.4, second paragraph]. Additionally, RFC 2616 teaches a plurality of error codes (e.g., 409, 500, 501) that are used in the process of notifying breakage information about the HTTP connection via an event notification connection between the server and the client [*response status code*, section 10.5, first sentence].

RFC 2616 and Ritchie are in the same field of endeavor as both cover the art of streaming data across a network. One of ordinary skill in the art at the time the invention was made would have been motivated to modify Ritchie's HTTP server and streaming technique with RFC 2616's response status codes and error reporting procedures as

doing so would allow for clients to be notified of errors via a standardized set of codes and allow for a graceful close of connections. Therefore, the invention as a whole would have been "*prima facie* obvious" to one of ordinary skill in the art at the time the invention was made.

Regarding claim 52, the claim comprises substantially the same limitations as claims 45 and 40. The same rationale for rejection is applicable.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Ala-Honkola. *Adaptive media stream* US PGPub 2003/0055995 (Describes a media streaming method adapted to changes in streaming conditions.)

b. Gandhi et al. *Data driven remote device control model with general programming interface-to-network messaging adapter* US PAT 7085814 (Describes a method of remote control for a media center.)

c. Lagerweij et al. *Method and system for assessing a right of access to content for a user device* US PGPub 2003/0217163 (Describes a method and system for access control for remote user devices.)

d. Reisman. *Method and apparatus for browsing using multiple coordinated device sets* US PGPub 2003/0229900 (Describes a method for multiple synchronized device display of remote media.)

e. Zintel et al. *XML-based template language for devices and services* US PGPub 6910068 (Describes tables, SOAP, and XML structures for media streaming across devices.)

f. Intel. *Overview of UPnP AV Architecture* (Provides an overview of UPnP audio-video media streaming architecture.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Imad Hussain whose telephone number is 571-270-3628. The examiner can normally be reached on Monday through Thursday from 0730 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on (571) 272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Imad Hussain

Beatriz Prieto